

# PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference <b>Acte118A/E11</b>	<b>FOR FURTHER ACTION</b> see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. <b>PCT/EP 02/ 13970</b>	International filing date (day/month/year) <b>10/12/2002</b>	(Earliest) Priority Date (day/month/year) <b>02/01/2002</b>
Applicant <b>ACTELION PHARMACEUTICALS LTD</b>		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 5 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

### 1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of invention is lacking** (see Box II).

4. With regard to the **title**,

☐ the text is approved as submitted by the applicant.

☒ the text has been established by this Authority to read as follows:

**NOVEL ALKANSULFONAMIDES AS ENDOTHELIN ANTAGONISTS**

5. With regard to the **abstract**,

☐ the text is approved as submitted by the applicant.

☒ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.

☐ as suggested by the applicant.

☐ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

☒ None of the figures.

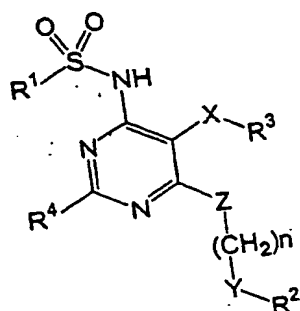
# INTERNATIONAL SEARCH REPORT

International application No.

PCT/EP 02/13970

## Box III TEXT OF THE ABSTRACT (Continuation of item 5 of the first sheet)

The invention relates to novel alkanesulfonamides of structure (I), wherein  $R^1$  is a lower alkyl group and the other variables are as defined in the description, and their use as active ingredients in the preparation of pharmaceutical compositions. The invention also concerns related aspects including processes for the preparation of the compounds, pharmaceutical compositions containing one or more of those compounds and especially their use as endothelin receptor antagonists in the treatment and prevention of diseases associated to the endothelin system.



(I)

**A. CLASSIFICATION OF SUBJECT MATTER**

IPC 7 C07D239/47 A61K31/506 A61P9/00 C07D239/56 C07D239/52  
C07D239/48 C07D401/14 C07D403/14

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C07D A61K A61P

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, CHEM ABS Data

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 01 17976 A (BOLLI MARTIN ;BOSS CHRISTOPH (CH); FISCHLI WALTER (CH); ACTELION P) 15 March 2001 (2001-03-15) claims	1-24
A	HARADA, HIRONORI ET AL: "Ethenesulfonamide and ethanesulfonamide derivatives, a novel class of orally active endothelin-A receptor antagonists" BIOORGANIC & MEDICINAL CHEMISTRY (2001), 9(11), 2955-2968 , XP002238534 page 2959; table 3	1-24
A	EP 0 743 307 A (TANABE SEIYAKU CO) 20 November 1996 (1996-11-20) claims	1-24
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☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

## \* Special categories of cited documents :

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

\*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

\*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

\*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

\*&\* document member of the same patent family

Date of the actual completion of the international search

16 April 2003

Date of mailing of the international search report

06/05/2003

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## INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP 02/13970

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P, A	EP 1 191 026 A (PFIZER LTD ; PFIZER (US)) 27 March 2002 (2002-03-27) claims page 25; example 3 -----	1-24

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP 02/13970

Patent document cited in search report		Publication date		Patent family member(s)		Publication date
WO 0117976	A	15-03-2001	AU	6839100 A		10-04-2001
			CA	2361402 A1		15-03-2001
			CN	1335839 T		13-02-2002
			WO	0117976 A1		15-03-2001
			EP	1137642 A1		04-10-2001
			HU	0201402 A2		28-08-2002
			NO	20013586 A		20-07-2001
<hr/>						
EP 0743307	A	20-11-1996	JP	3013752 B2		28-02-2000
			JP	8311043 A		26-11-1996
			AT	205482 T		15-09-2001
			AT	224879 T		15-10-2002
			CA	2176776 A1		17-11-1996
			CN	1146990 A , B		09-04-1997
			DE	69615085 D1		18-10-2001
			DE	69615085 T2		06-06-2002
			DE	69624010 D1		31-10-2002
			DK	743307 T3		26-11-2001
			DK	959072 T3		20-01-2003
			EP	0743307 A1		20-11-1996
			EP	0959072 A1		24-11-1999
			EP	0959073 A1		24-11-1999
			ES	2163548 T3		01-02-2002
			GR	3036611 T3		31-12-2001
			PT	743307 T		28-12-2001
			PT	959072 T		31-12-2002
			SG	47141 A1		20-03-1998
			US	5739333 A		14-04-1998
			JP	3013778 B2		28-02-2000
			JP	9059261 A		04-03-1997
<hr/>						
EP 1191026	A	27-03-2002	BR	0104141 A		09-07-2002
			EP	1191026 A1		27-03-2002
			JP	2002128780 A		09-05-2002
			US	2002061889 A1		23-05-2002